



# AFCTN Test Report 93-071

AFCTB-ID  
93-048



## Technical Publication Transfer

Using:



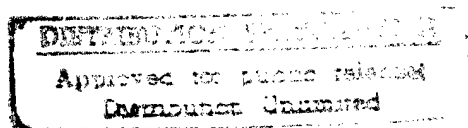
Northrop Corporation's Data



MIL-M-28001A (SGML)

Quick Short Test Report

17 May 1993



Prepared for

Electronic Systems Center

[DTIC QUALITY INSPECTED 8]



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**17 May 1993**

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## 1. Introduction

### 1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

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## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Northrop Corporation's interpretation and use of the CALS standards in transferring technical publication data. Northrop used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

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## 2. Test Parameters

Test Plan: AFCTB 93-048

Date of  
Evaluation: 17 May 1993

Evaluator: George Elwood  
Air Force CALS Test Bed  
DET 2 HQ ESC/ENCP  
4027 Colonel Glenn Hwy  
Suite 300  
Dayton OH 45431-1672

Data  
Originator: John P. Kent  
Northrop Corporation  
B-2 Division  
M/S L591/GK  
8900 East Washington Blvd  
Pico Rivera CA 90660  
(310) 948-0624

Data  
Description: Technical Manual Test  
1 Document Declaration file  
1 Document Type Definition (DTD)  
1 Text file

Data  
Source System:

1840

### HARDWARE

Unknown

### SOFTWARE

Unknown

Text/Standard Generalized Markup Language (SGML)

### HARDWARE

Unknown

### SOFTWARE

Unknown

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.9 UNIX

XSoft CAPS/CALS v40.4

Texas Instruments (TI) Tapetool v1.0.1

PC 486/50

AFCTN Tapetool v1.2.9 DOS

MIL-M-28001 (SGML)

SUN SparcStation 2

ArborText ADEPT v4.2.1

PC 486/50

Datalogics ParserStation v3.36

Exoterica XGMLNormalizer v1.2e3.2

Exoterica VALIDATOR v2.0 EXL

McAfee & McAdam Sema Mark-it v2.3

Public Domain sgmls

Standards

Tested:

MIL-STD-1840A

MIL-M-28001A



### **3. 1840A Analysis**

#### **3.1 External Packaging**

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files recorded on the tape.

#### **3.2 Transmission Envelope**

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

##### **3.2.1 Tape Formats**

The tape was run through the AFCTN *Tapetool* v1.2.9 utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read using XSoft's *CAPS read1840A* utility without any reported errors.

The tape was read using TI's *Tapetool* v1.0.1 without a reported error.

##### **3.2.2 Declaration and Header Fields**

No errors were found in the Document Declaration file and data file headers.

---

The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

#### 4. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were included on the tape.

#### 5. SGML Analysis

The AFCTB has several parsers available for evaluating submitted DTD and text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report. Changes to DTD or text files required by each system are not documented in the report.

The text and DTD files from the tape were evaluated using Datalogics' *ParseStation*. No errors were reported from either file.

The text and DTD files from this document were evaluated using Exoterica's *Validator* parser with no reported errors.

The text and DTD files from this document were tested using Exoterica's *XGMLNormalizer* parser with no reported errors.

The text and DTD files from the tape were evaluated using McAfee & McAdam's *Sema Mark-it* parser with no reported errors.

The text and DTD files from the tape were evaluated using the Public Domain *sgmls* parser with no reported errors.

The text file was imported into ArborText's *Adept* software and an attempt to publish was made. The DTD parsed without a reported error. The FOSI had many reported errors and no effort was made to correct the multiple errors.

The DTD and text files meet the CALS MIL-M-28001A specification.

## **6. Raster Analysis**

No Raster files were included on this tape.

## **7. CGM Analysis**

No Computer Graphics Metafile (CGM) files were included on this tape.

## 8. Conclusions and Recommendations

In summary, the physical tape structure from Northrop Corporation was correct. The tape could be read properly using several tape reading utilities available in the AFCTB. The physical and CALS specific requirements meet the standards.

The DTD and text files meet the CALS MIL-M-28001A specification.

The tape meets the CALS MIL-STD-1840A and appropriate data requirements.

## 9. Appendix A - Tapetool Report Logs

### 9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release 9 (0)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and Labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Sat May 15 10:14:59 1993

MIL-STD-1840A File Catalog

File Set Directory: C:\CTN129\OVERLAND\SET007

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000009	Extracted
D001G002	DTD	D/00260	02048/000001	Extracted
D001H003	Output Specification	D/00260	02048/000006	Extracted

Catalog Process terminated normally.

---

## 9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release 9 (O)

Standards referenced:

ANSI X3.27 (1987) - File Structure and Labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Sat May 15 10:14:55 1993

ANSI Tape Import Log

Rewinding tape to load point...

VOL1ITDS01 CONTROLLER

4

Label Identifier: VOL1  
Volume Identifier: ITDS01  
Volume Accessibility:  
Owner Identifier:  
Label Standard Version: 4

HDR1D001 ITDS0100010001000100 93127 93127 000000 CONTROLLER

Label Identifier: HDR1  
File Identifier: D001  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93127  
Expiration Date: 93127  
File Accessibility:  
Block Count: 000000  
Implementation Identifier: CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

---

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001                    ITDS0100010001000100 93127 93127 000001    CONTROLLER

Label Identifier: EOF1  
File Identifier: D001  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93127  
Expiration Date: 93127  
File Accessibility:  
Block Count: 000001  
Implementation Identifier:    CONTROLLER

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

<<<<< PART OF LOG REMOVED HERE >>>>>

\*\*\*\*\* Tape Mark \*\*\*\*\*

##### End of Volume ITDS01 #####

##### End Of Tape File Set #####

Rewinding tape to load point...

Tape Import Process terminated normally.

---

## 9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release 9 (O)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Sat May 15 10:14:59 1993

MIL-STD-1840A File Set Evaluation Log

File Set: SET007

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK  
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: STPRO25.2.6

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19910301

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT, Techn  
4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.2.6

dstrelid: NONE

dtetrm: 19930507

dlvacc: NONE

filcnt: T1, H1, G1

ttlcls: UNCLASSIFIED

doccls: SECRET <<<< MARKED SECRET FOR TEST ONLY >>>>

doctyp: NONE

docttl: FORTUNES

Found file: D001T001

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: STPRO25.2.6

dstdocid: STPRO25.2.6

txtfilid: W

doccls: SECRET <<<< MARKED SECRET AS PART OF TEST >>>>

notes: NONE

Saving Text Header File: D001T001.HDR



Saving Text Data File: D001T001.TXT

Found file: D001G002

Extracting DTD Header Records...

Evaluating DTD Header Records...

srcdocid: STPRO25.2.6

dstdocid: STPRO25.2.6

notes: NONE

Saving DTD Header File: D001G002.HDR

Saving DTD Data File: D001G002.DTD

Found file: D001H003

Extracting Output Specification Header Records...

Evaluating Output Specification Header Records...

srcdocid: STPRO25.2.6

dstdocid: STPRO25.2.6

notes: NONE

Saving Output Specification Header File: D001H003.HDR

Saving Output Specification Data File: D001H003.OS

Evaluating numbering scheme...

No errors were encountered during numbering scheme evaluation.

Numbering scheme evaluation complete.

Checking file count...

No errors were encountered during file count verification.

File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MLL-STD-1840A File Set Evaluation Complete.